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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/731,925	12/09/2003	Karim M. Gabriel	GAP02U	6666
32047	7590	03/01/2005	EXAMINER	
GROSSMAN, TUCKER, PERREAULT & PFLEGER, PLLC 55 SOUTH COMMERICAL STREET MANCHESTER, NH 03101			PENG, KUO LIANG	
			ART UNIT	PAPER NUMBER

1712

DATE MAILED: 03/01/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/731,925

Applicant(s)

GABRIEL, KARIM M.

Examiner

Kuo-Liang Peng

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 12/9/03 IDS.
- 2a) ☐ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-5 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-5 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☐ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date 12/9/03.
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____.

DETAILED ACTION

Claim Rejections - 35 USC § 112

1. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

2. Claims 1-5 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

In Claim 1 (line 3) and Claim 5 (line 5), “said silyl group is present at an average functionality in the range of 1.0 - 6.0” causes confusion because it is not clear as to whether the oligomer or polymeric resin has on the average 1.0 to 6.0 hydrolyzable silyl groups or the silyl group on the oligomer or polymeric resin has on the average 1.0 to 6.0 hydrolyzable groups. However, note that the specification (page 2, 3rd paragraph) seems to indicate that the oligomer or polymeric resin has on the average 1.0 to 6.0 hydrolyzable silyl groups.

In Claims 2-3, “said functionality” caused confusion because of the issue mentioned above in Claim 1.

3. The following Office action is based on the claimed oligomer or polymeric resin has on the average 1.0 to 6.0 hydrolyzable groups.

Claim Rejections - 35 USC § 102

4. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

5. Claims 1-5 are rejected under 35 U.S.C. 102(b) as being anticipated by Bahadur (US 6 258 878).

For Claims 1-3, Bahadur discloses a one-part moisture-curable composition consisting essentially of: (A) 100 parts by weight of a saturated hydrocarbon polymer having on average at least 1.5 hydrolyzable silyl groups in its molecule; (B) 10 to 300 parts by weight of a silicon-free conduit compound having at least one C6 to C30 hydrocarbon group in its molecule selected from the group consisting of esters, ethers, epoxy-containing compounds, anhydrides and ketones; and (C) a sufficient amount of a silanol condensation catalyst to cure said composition upon exposure to moisture. The saturated hydrocarbon polymer (A)

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must contain a sufficient amount of hydrolyzable silyl functionality to provide a moisture-curable composition. In this regard, the composition is considered curable when it forms a tack-free surface and a cohesive skin upon exposure to moisture. Preferably, the polymer has, on average, at least 1.5 silicon-bonded hydrolyzable groups per molecule, more preferably more than 2 such groups.

Polymer (A) can be any hydrocarbon polymer having no unsaturated carbon-carbon bonds other than aromatic rings. As used herein, the term

"polymer" is generic to homopolymers, oligomers, interpolymers and copolymers, all of which are within the scope of the instant invention. Non-limiting examples include polymerized products of monomers such as: (i) dienes, such as butadiene, isoprene and cyclopentadiene, wherein the

polymer is subsequently hydrogenated; (ii) olefins having 2 to 6 carbon atoms, such as ethylene, propylene, isobutylene, butene and hexene; and

(iii) styrenic monomers, such as styrene, *o*-methyl styrene and *p*-methylstyrene.

Although there is no particular restriction on the molecular weight of the polymer, it is preferred that its number average molecular weight is in the range of 500 to 500,000, more preferably 5,000 to 100,000, particularly when the composition is to be utilized as a caulk or sealant. The moisture-reactive silyl functionality of the hydrocarbon polymer can reside at the ends of the polymer or

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along the main chain and has the formula $-\text{SiX}_n(\text{R})_{3-n}$ wherein R is independently selected from hydrocarbon groups having 1 to 30 carbon atoms (e.g., methyl, ethyl, propyl, butyl, hexyl, phenyl), n is an integer having a value of 1, 2 or 3 and X is a silicon-bonded hydrolyzable group selected from alkoxy, acyloxy, ketoxime, amino, amido, aminoxy or alkenyloxy groups, preferably containing no more than 6 carbon atoms. It is preferred that R is selected from alkyl having 1 to 6 carbon atoms or phenyl, X is methoxy or ethoxy and n is 2 or 3. The reactive silyl functionality can be connected to the polymer by a hydrocarbon group or through a short siloxane chain. (col. 3, line 16 to col. 4, line 10 and Examples)

For Claim 4, preferably, the condensation catalyst is selected from tin carboxylates, titanium carboxylates or mixtures thereof. Most preferred catalysts are tin (IV) carboxylates since these have been observed to provide the most storage stable one-part compositions. (col. 5, line 65 to col. 6, line 6)

For Claim 5, Bahadur further teaches a method for coating a substrate as illustrated in Examples. Note that the composition can be in a container. (col. 7, lines 23-46)

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6. Claims 1-4 are rejected under 35 U.S.C. 102(b) as being anticipated by Waldman (US 6 001 946).

For Claims 1-3, Waldman discloses a composition of matter which is the product of reacting (A) a prepolymer obtained by reacting a polyol component with an excess of difunctional or polyfunctional isocyanate so that said prepolymer contains unreacted isocyanate groups with (B) a silane of formula (1). Waldman further discloses a curable formulation useful for instance as sealants, containing the aforementioned composition of matter together with a cure catalyst and one or more conventional functional adjuvants selected from the group consisting of fillers, plasticizers, thixotropes, antioxidants, ultraviolet stabilizers, dehydrating agents and adhesion promoters. Curable N-alkoxysilylalkyl-aspartic acid ester end-capped urethane polymers of the present invention are prepared from the reaction of a N-(organosilyl)-aspartic acid diester endcapper of formula (1) with the isocyanate terminated polyurethane prepolymer described above. (col. 2, lines 2-54, col. 4, lines 8-19 and Examples)

For Claim 4, the cure catalyst is exemplified in col. 5, lines 24-29 and col. 3, lines 61-67.

Claim Rejections - 35 USC § 103

7. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

8. Claim 5 is rejected under 35 U.S.C. 103(a) as being unpatentable over Waldman.

Waldman discloses a curable formulation, *supra*, which is incorporated herein by reference. Waldman further teaches a method for coating a substrate. (Example 17) Waldman is silent on the use of a container. However, it would have been obvious to one of ordinary skill in the art at the time of the invention was made to use a container for preparing the formulation. The motivation for using a container is to provide a storage for the formulation and to make the formulation portable.

9. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Kuo-Liang Peng whose telephone number is


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(571) 272-1091. The examiner can normally be reached on Monday-Friday from 8:30 AM to 5:00 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Randy Gulakowski, can be reached on (571) 272-1302. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

klp
February 25, 2005


KUO-LIANG PENG
PRIMARY EXAMINER

Kuo-Liang Peng
Primary Examiner
Art Unit 1712